10/719,257

```
 * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 11:57:01 ON 10 OCT 2006

=> file biosis medline caplus wpids uspatfull
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

FILE 'BIOSIS' ENTERED AT 11:57:24 ON 10 OCT 2006
Copyright (c) 2006 The Thomson Corporation

FILE 'MEDLINE' ENTERED AT 11:57:24 ON 10 OCT 2006

FILE 'CAPLUS' ENTERED AT 11:57:24 ON 10 OCT 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIDS' ENTERED AT 11:57:24 ON 10 OCT 2006
COPYRIGHT (C) 2006 THE THOMSON CORPORATION

FILE 'USPATFULL' ENTERED AT 11:57:24 ON 10 OCT 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

*** YOU HAVE NEW MAIL ***

=> s label? (3a) nucleoside?
L1         2654 LABEL? (3A) NUCLEOSIDE?

=> s label? (3a) base?
L2        24982 LABEL? (3A) BASE?

=> s l1 and l2
L3          439 L1 AND L2

=> s l3 and linker? (3a) base? (3a) label?
L4            8 L3 AND LINKER? (3A) BASE? (3A) LABEL?

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5            8 DUP REM L4 (0 DUPLICATES REMOVED)

=> d l5 bib abs 1-8

L5   ANSWER 1 OF 8  USPATFULL on STN
AN     2006:221621  USPATFULL
TI     Labelled nucleotides
IN     Barnes, Colin, Nr. Saffron Walden, UNITED KINGDOM
       Balasubramanian, Shankar, Nr. Saffron Walden, UNITED KINGDOM
       Liu, Xiaohai, Nr. Saffron Walden, UNITED KINGDOM
       Swerdlow, Harold, Nr. Saffron Walden, UNITED KINGDOM
       Milton, John, Nr. Saffron Walden, UNITED KINGDOM
PA     Solexa Limited (non-U.S. corporation)
PI     US 2006188901      A1   20060824
AI     US 2005-301578     A1   20051213 (11)
RLI    Division of Ser. No. US 2002-227131, filed on 23 Aug 2002, GRANTED, Pat.
       No. US 7057026
PRAI   GB 2001-29012       20011204
DT     Utility
FS     APPLICATION
LREP   KLAUBER & JACKSON, 411 HACKENSACK AVENUE, HACKENSACK, NJ, 07601, US
CLMN   Number of Claims: 17
ECL    Exemplary Claim: 1-8
```

DRWN 6 Drawing Page(s)
LN.CNT 892
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Nucleosides and nucleotides are disclosed that are linked to detectable labels via a cleavable linker group.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 2 OF 8 USPATFULL on STN
AN 2006:188645 USPATFULL
TI Labelled nucleotides
IN Milton, John, Essex, UNITED KINGDOM
Ruediger, Silke, Essex, UNITED KINGDOM
Liu, Xiaohai, Essex, UNITED KINGDOM
PI US 2006160081 A1 20060720
AI US 2003-525399 A1 20030822 (10)
WO 2003-GB3690 20030822
20050223 PCT 371 date
RLI Continuation-in-part of Ser. No. US 2002-227131, filed on 23 Aug 2002, GRANTED, Pat. No. US 7057026
DT Utility
FS APPLICATION
LREP KLAUBER & JACKSON, 411 HACKENSACK AVENUE, HACKENSACK, NJ, 07601, US
CLMN Number of Claims: 74
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 1543
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides a nucleotide or nucleoside having a base attached to a detectable label via a cleavable linker, characterised in that the cleavable linker contains a moiety selected from the group comprising: Formula (I) wherein X is selected from the group comprising O, S, NH and NQ wherein Q is a C.sub.1-10 substituted or unsubstituted alkyl group, Y is selected from the group comprising O, S, NH and N(allyl), T is hydrogen or a C.sub.1-10 substituted or unsubstituted alkyl group and * indicates where the moiety is connected to the remainder of the nucleotide or nucleoside).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 3 OF 8 USPATFULL on STN
AN 2006:188639 USPATFULL
TI Labelled nucleotides
IN Balasubramanian, Shankar, Cambridge, UNITED KINGDOM
Barnes, Colin, Essex, UNITED KINGDOM
Liu, Xiaohai, Essex, UNITED KINGDOM
Swerdlow, Harold, Essex, UNITED KINGDOM
PI US 2006160075 A1 20060720
AI US 2002-497594 A1 20021204 (10)
WO 2002-GB5474 20021204
20050328 PCT 371 date
RLI Continuation of Ser. No. US 2002-227131, filed on 23 Aug 2002, GRANTED, Pat. No. US 7057026
PRAI GB 2001-29012 20011204
DT Utility
FS APPLICATION
LREP KLAUBER & JACKSON, 411 HACKENSACK AVENUE, HACKENSACK, NJ, 07601, US
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 6 Drawing Page(s)
LN.CNT 902
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Nucleosides and nucleotides are disclosed that are linked to detectable labels via a cleavable linker group.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 4 OF 8 USPATFULL on STN
AN 2005:44259 USPATFULL
TI Synthesis and compositions of 2'-terminator nucleotides
IN Bodepudi, Veeraiah, San Ramon, CA, UNITED STATES
Will, Stephen Gordon, Oakland, CA, UNITED STATES
Gelfand, David Harrow, Oakland, CA, UNITED STATES
PA Roche Molecular Systems, Inc., Alameda, CA (U.S. corporation)
PI US 2005037991 A1 20050217
AI US 2004-879494 A1 20040628 (10)
PRAI US 2003-483861P 20030630 (60)
US 2003-519661P 20031112 (60)
DT Utility
FS APPLICATION
LREP QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C., P O BOX 458, ALAMEDA, CA, 94501
CLMN Number of Claims: 84
ECL Exemplary Claim: 1
DRWN 24 Drawing Page(s)
LN.CNT 2412
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides compositions the comprise nucleotides and/or nucleosides having blocking groups at 2'-positions of sugar moieties. Methods of synthesizing these nucleic acids are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 8 USPATFULL on STN
AN 2005:43670 USPATFULL
TI 2'-terminator nucleotide-related methods and systems
IN Gelfand, David Harrow, Oakland, CA, UNITED STATES
Reichert, Fred Lawrence, San Leandro, CA, UNITED STATES
Bodepudi, Veeraiah, San Ramon, CA, UNITED STATES
Gupta, Amar, Danville, CA, UNITED STATES
Will, Stephen, Oakland, CA, UNITED STATES
Myers, Thomas, Alameda, CA, UNITED STATES
PA Roche Molecular Systems, Inc., Alameda, CA (U.S. corporation)
PI US 2005037398 A1 20050217
AI US 2004-879493 A1 20040628 (10)
PRAI US 2003-483861P 20030630 (60)
DT Utility
FS APPLICATION
LREP QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C., P O BOX 458, ALAMEDA, CA, 94501
CLMN Number of Claims: 128
ECL Exemplary Claim: 1
DRWN 8 Drawing Page(s)
LN.CNT 2835
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides methods of extending primer nucleic acids and sequencing target nucleic acids. The methods include the use of 2'-terminator nucleotides to effect chain termination. In addition to related reaction mixtures and kits, the invention also provides computers and computer readable media.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 8 USPATFULL on STN
AN 2004:63782 USPATFULL
TI Terminal phosphate blocked nucleoside polyphosphates
IN Sood, Anup, Flemington, NJ, UNITED STATES
Kumar, Shiv, Belle Mead, NJ, UNITED STATES

Fuller, Carl, Berkeley Heights, NJ, UNITED STATES
Nelson, John, Hillsborough, NJ, UNITED STATES
PI US 2004048300 A1 20040311
AI US 2003-651355 A1 20030829 (10)
PRAI US 2002-406892P 20020829 (60)
DT Utility
FS APPLICATION
LREP AMERSHAM BIOSCIENCES, PATENT DEPARTMENT, 800 CENTENNIAL AVENUE, PISCATAWAY, NJ, 08855
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 599
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention describes terminal phosphate blocked nucleoside polyphosphates that are stable at high temperature and their use in nucleic acid amplification and analysis. Current invention further describes charge modified terminal phosphate blocked nucleoside polyphosphates for improved incorporation and direct loading of nucleic acid sequencing reactions onto separating media.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 7 OF 8 USPATFULL on STN
AN 2003:152771 USPATFULL
TI Labelled Nucleotides
IN Barnes, Colin, Little Chesterford Nr. Saffron Walden, UNITED KINGDOM
Balasubramanian, Shankar, Little Chesterford Nr. Saffron Walden, UNITED KINGDOM
Liu, Xiaohai, Little Chesterford Nr. Saffron Walden, UNITED KINGDOM
Swerdlow, Harold, Saffron Walden, UNITED KINGDOM
PI US 2003104437 A1 20030605
US 7057026 B2 20060606
AI US 2002-227131 A1 20020823 (10)
PRAI GB 2001-29012 20011204
DT Utility
FS APPLICATION
LREP PALMER & DODGE, LLP, KATHLEEN M. WILLIAMS, 111 HUNTINGTON AVENUE, BOSTON, MA, 02199
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 6 Drawing Page(s)
LN.CNT 915
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Nucleosides and nucleotides are disclosed that are linked to detectable labels via a cleavable linker group.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

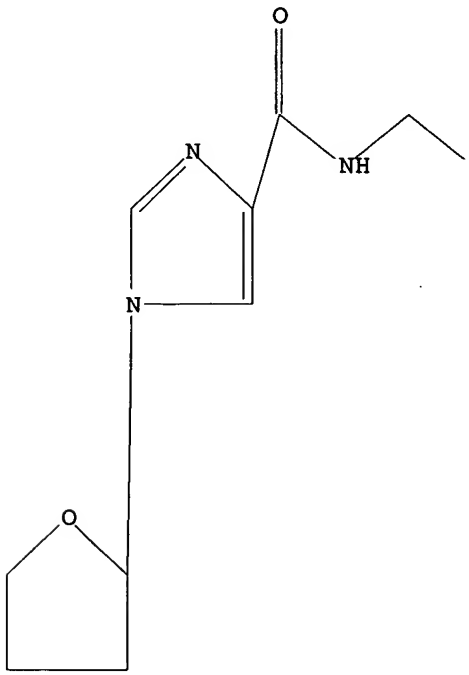
L5 ANSWER 8 OF 8 USPATFULL on STN
AN 2001:152688 USPATFULL
TI Compounds for mass spectrometry comprising nucleic acid bases and aryl ether mass markers
IN Schmidt, Gunter, Houghton, United Kingdom
Thompson, Andrew Hugin, Alloway, United Kingdom
Johnstone, Robert Alexander Walker, Bebington, United Kingdom
PA BRAX Group Limited, Cambridge, United Kingdom (non-U.S. corporation)
PI US 6287780 B1 20010911
WO 9932501 19990701
AI US 2000-581792 20000811 (9)
WO 1998-GB3842 19981218
20000811 PCT 371 date
20000811 PCT 102(e) date
PRAI GB 1997-26953 19971219

GB 1998-15163 19980713
GB 1998-15164 19980713
GB 1998-15166 19980713
GB 1998-23646 19981028
DT Utility
FS GRANTED
EXNAM Primary Examiner: Riley, Jezia
LREP Burns, Doane, Swecker & Mathis, L.L.P.
CLMN Number of Claims: 45
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 1394
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a compound having the following formula: N-L-M wherein N comprises one or more nucleic acid bases, L is either a direct bond between N and M or L comprises a linker moiety, and M comprises a mass marker comprising an aryl ether.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=>

```
=> file reg
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                       131.34     131.55

FILE 'REGISTRY' ENTERED AT 12:27:38 ON 10 OCT 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    9 OCT 2006  HIGHEST RN 910025-51-3
DICTIONARY FILE UPDATES:   9 OCT 2006  HIGHEST RN 910025-51-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10617992.str

L6      STRUCTURE UPLOADED

=> d l6
L6 HAS NO ANSWERS
L6                STR
```



Structure attributes must be viewed using STN Express query preparation.

=> s l6 full
FULL SEARCH INITIATED 12:28:08 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 1507 TO ITERATE

100.0% PROCESSED 1507 ITERATIONS 167 ANSWERS
SEARCH TIME: 00.00.01

L7 167 SEA SSS FUL L6

=> file caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 166.94 298.49

FILE 'CAPLUS' ENTERED AT 12:28:13 ON 10 OCT 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 10 Oct 2006 VOL 145 ISS 16
FILE LAST UPDATED: 8 Oct 2006 (20061008/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/infopolicy.html

*** YOU HAVE NEW MAIL ***

=> s l7
L8 102 L7

=> s l8 and label? (4a) base
439330 LABEL?
681700 BASE
1031 LABEL? (4A) BASE
L9 0 L8 AND LABEL? (4A) BASE

=> s l8 and label?
439330 LABEL?
L10 9 L8 AND LABEL?

=> dup rem l10
PROCESSING COMPLETED FOR L10
L11 9 DUP REM L10 (0 DUPLICATES REMOVED)

=> d l11 bib abs hitstr 1-9

L11 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

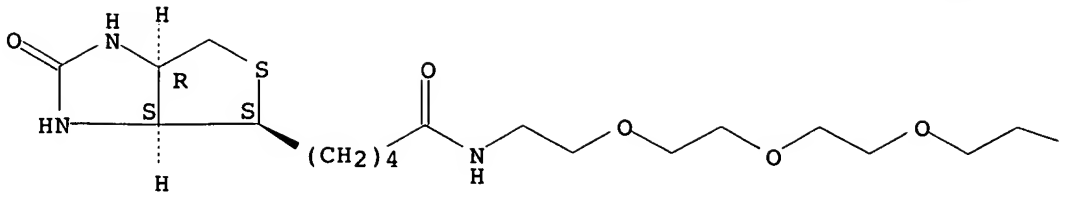
AN 2004:467906 CAPLUS
DN 141:18714
TI Labeled imidazole nucleotide analogs for use in PCR and hybridization and nuclease assays
IN Bodepudi, Veeraiah; Gupta, Amar; Will, Stephen
PA Roche Diagnostics G.m.b.H., Germany; F. Hoffmann-La Roche A.-G.
SO PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004048397	A2	20040610	WO 2003-EP13014	20031120
	WO 2004048397	A3	20040701		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2506797	AA	20040610	CA 2003-2506797	20031120
	AU 2003294716	A1	20040618	AU 2003-294716	20031120
	EP 1565480	A2	20050824	EP 2003-785650	20031120
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006510623	T2	20060330	JP 2004-554406	20031120
	US 2004171040	A1	20040902	US 2003-719257	20031121
PRAI	US 2002-428484P	P	20021122		
	WO 2003-EP13014	W	20031120		

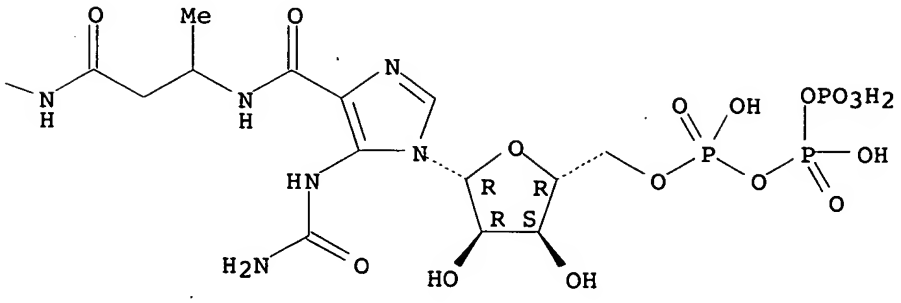
OS MARPAT 141:18714
AB The invention relates to labeled imidazole nucleotide analogs which are useful for detection of nucleotide sequences. Specifically, the invention relates to labeled imidazole-PEG compds., such as nucleosides, nucleotides, and nucleic acids incorporating such compds., and methods utilizing such compds. The invention further relates to kits comprising labeled imidazole-PEG compds. Thus, an imidazole triphosphate attached to a biotin label through a tetraethylene glycol linker was prepared and used to label single-stranded DNA using terminal deoxynucleotidyl transferase. This labeled DNA was hybridized to oligonucleotide microarrays to analyze cytochrome P 450 polymorphisms. Hybridization was detected using streptavidin fluorescent dye conjugates.
IT 700841-05-0 700841-07-2 700841-09-4
700841-11-8 700841-12-9
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(labeled imidazole nucleotide analogs for use in PCR and hybridization and nuclease assays)
RN 700841-05-0 CAPLUS
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[17-[5-[(aminocarbonyl)amino]-1-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-β-D-ribofuranosyl]-1H-imidazol-4-yl]-15-methyl-13,17-dioxo-3,6,9-trioxa-12,16-diazaheptadec-1-yl]hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

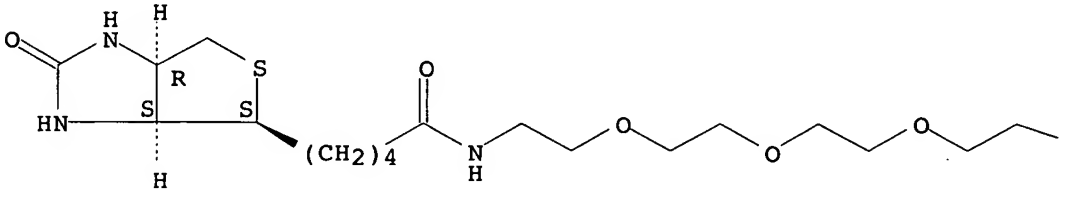


RN 700841-07-2 CAPLUS

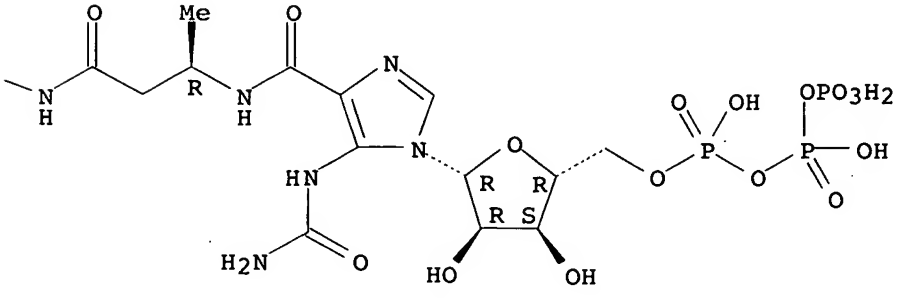
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[(15R)-17-[5-[(aminocarbonyl)amino]-1-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-β-D-ribofuranosyl]-1H-imidazol-4-yl]-15-methyl-13,17-dioxo-3,6,9-trioxa-12,16-diazaheptadec-1-yl]hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

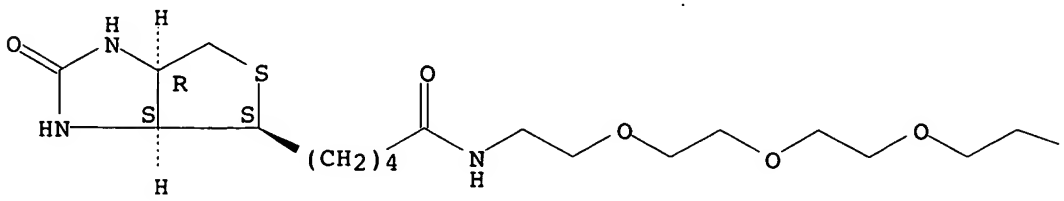


RN 700841-09-4 CAPLUS

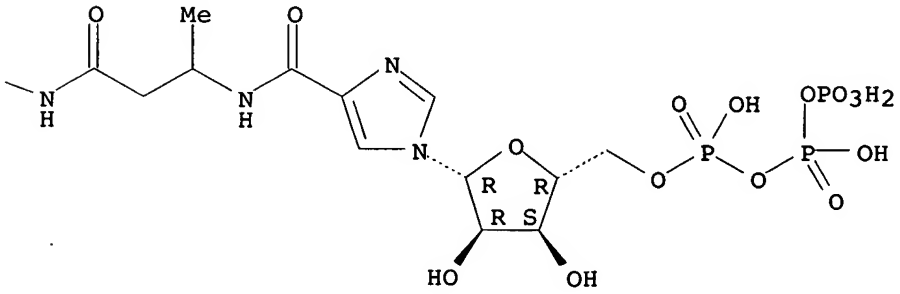
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[17-[1-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-β-D-ribofuranosyl]-1H-imidazol-4-yl]-15-methyl-13,17-dioxo-3,6,9-trioxa-12,16-diazaheptadec-1-yl]hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

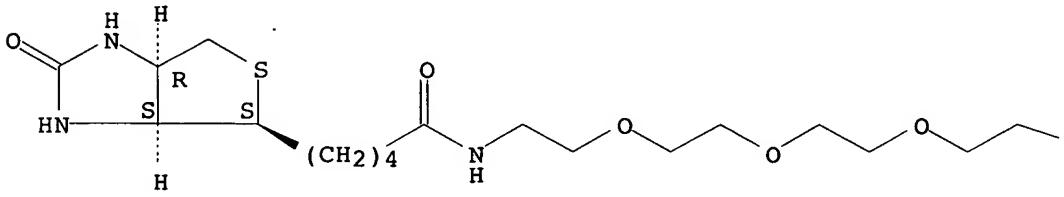


RN 700841-11-8 CAPLUS

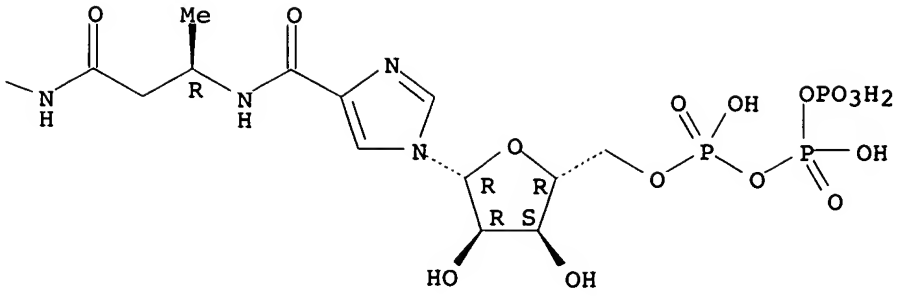
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[(15R)-17-[1-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-β-D-ribofuranosyl]-1H-imidazol-4-yl]-15-methyl-13,17-dioxo-3,6,9-trioxa-12,16-diazaheptadec-1-yl]hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



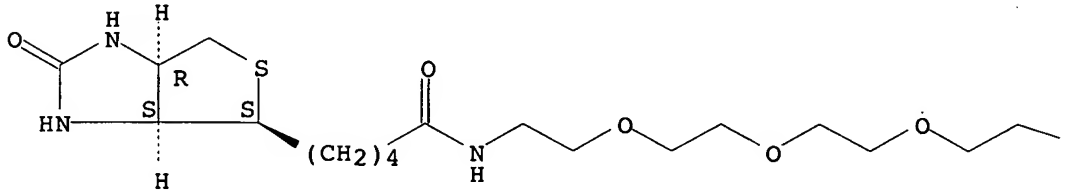
PAGE 1-B



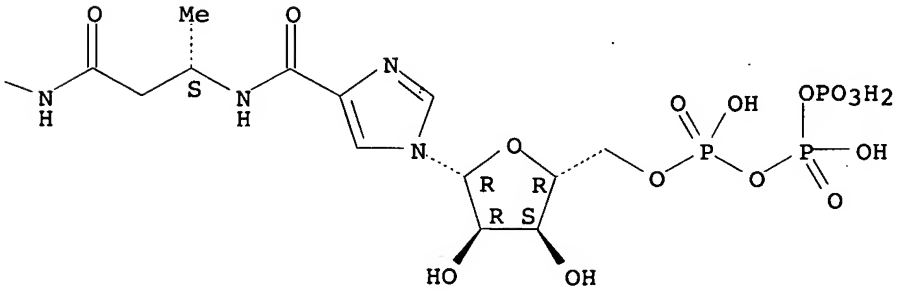
RN 700841-12-9 CAPLUS
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[(15S)-17-[1-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-β-D-ribofuranosyl]-1H-imidazol-4-yl]-15-methyl-13,17-dioxo-3,6,9-trioxa-12,16-diazaheptadec-1-yl]hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



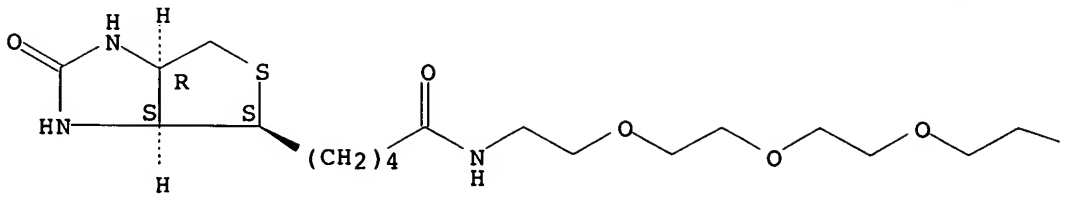
PAGE 1-B



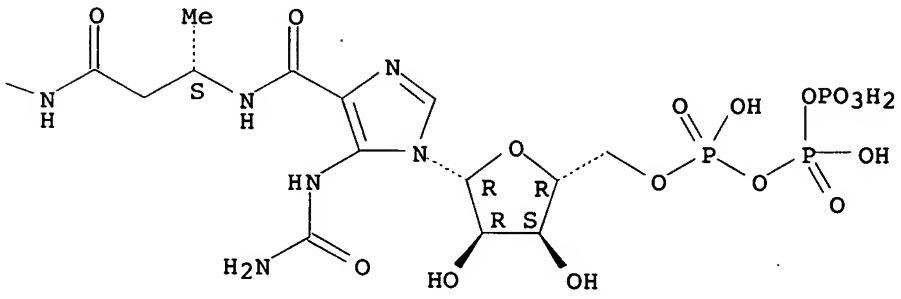
IT 700840-96-6P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(labeled imidazole nucleotide analogs for use in PCR and hybridization and nuclease assays)
RN 700840-96-6 CAPLUS
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[(15S)-17-[5-[(aminocarbonyl)amino]-1-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-β-D-ribofuranosyl]-1H-imidazol-4-yl]-15-methyl-13,17-dioxo-3,6,9-trioxa-12,16-diazaheptadec-1-yl]hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



L11 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:430542 CAPLUS
DN 141:2281
TI Labeled pseudoisocytidine and pseudouridine for use in labeling nucleic acids for hybridization assays
IN McGall, Glenn H.; Barone, Anthony D.
PA Affymetrix, Inc., USA
SO U.S. Pat. Appl. Publ., 79 pp., Cont.-in-part of U.S. Pat. Appl. 2003 180,757.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004101892	A1	20040527	US 2003-641677	20030815
	WO 9727317	A1	19970731	WO 1997-US1603	19970122
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 6344316	B1	20020205	US 1997-882649	19970625
	US 2001018514	A1	20010830	US 1998-126645	19980731
	EP 1589025	A2	20051026	EP 2005-11696	19990720
	EP 1589025	A3	20060419		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	US 2001044531	A1	20011122	US 2001-780574	20010209
	US 6596856	B2	20030722		
	US 2002165372	A1	20021107	US 2001-952387	20010911
	US 6965020	B2	20051115		
	US 2002182625	A1	20021205	US 2002-97113	20020312

	US 2003180757	A1	20030925	US 2002-314012	20021205
	US 6864059	B2	20050308		
	CA 2507573	AA	20040624	CA 2003-2507573	20031205
	WO 2004052907	A1	20040624	WO 2003-US38652	20031205
	W: CA, JP				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
	EP 1575972	A1	20050921	EP 2003-787272	20031205
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
	JP 2006515863	T2	20060608	JP 2005-508470	20031205
	US 2005003496	A1	20050106	US 2003-745916	20031223
	JP 2006191932	A2	20060727	JP 2006-35873	20060213
	JP 2006258818	A2	20060928	JP 2006-77729	20060320
PRAI	US 1996-10471P	P	19960123		
	US 1997-35170P	P	19970109		
	WO 1997-US1603	A1	19970122		
	US 1997-882649	A2	19970625		
	US 1998-126645	B2	19980731		
	US 2001-780574	A2	20010209		
	US 2001-952387	A2	20010911		
	US 2002-97113	A2	20020312		
	US 2002-314012	A2	20021205		
	JP 1997-527122	A3	19970122		
	EP 1999-937150	A3	19990720		
	JP 2000-562553	A3	19990720		
	US 2000-780574	A2	20000209		
	US 2000-231827P	P	20000911		
	US 2001-275202P	P	20010312		
	US 2003-641677	A	20030815		
	WO 2003-US38652	W	20031205		
OS	MARPAT 141:2281				
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Nucleic acid labeling compds. pseudoisocytidine derivative I (A = H, functional group permitting attachment of compound to nucleic acid; X = O, S, NR1, CHR2; Y = H, N3, F, OR9, SR9, NHR9; Z = H, N3, F, OR10; R1,R2,R9,R10 = H, alkyl, aryl; L = linker CH:CHR11, C.tplbond.CR11; R11 = alkyl, alkenylalkyl, alkynalalkyl, amidoalkyl, aminoalkyl, alkoxy, amino, aryl; Q = detectable moiety; M = connecting group; m = 0-3) and pseudouridine derivative II (variables as in I) are disclosed. I and II are synthesized by condensing a heterocyclic derivative with a cyclic group (e.g. a ribofuranose derivative). The labeling compds. are suitable for enzymic attachment to a nucleic acid, either terminally or internally, to provide a mechanism of nucleic acid detection, e.g., for hybridization assays.

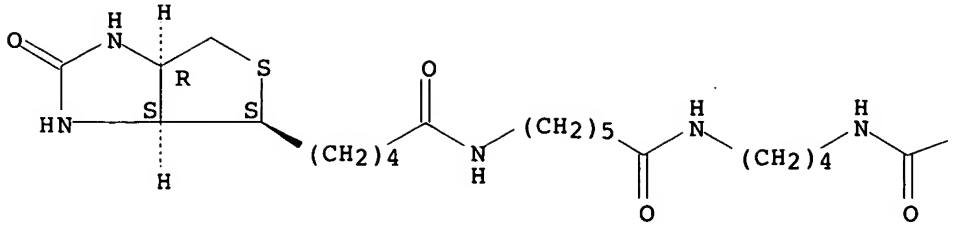
IT 257297-78-2P 257297-98-6P 694438-35-2P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(labeled pseudoisocytidine and pseudouridine for use in labeling nucleic acids for hybridization assays)

RN 257297-78-2 CAPLUS

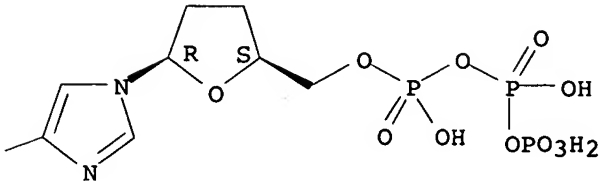
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



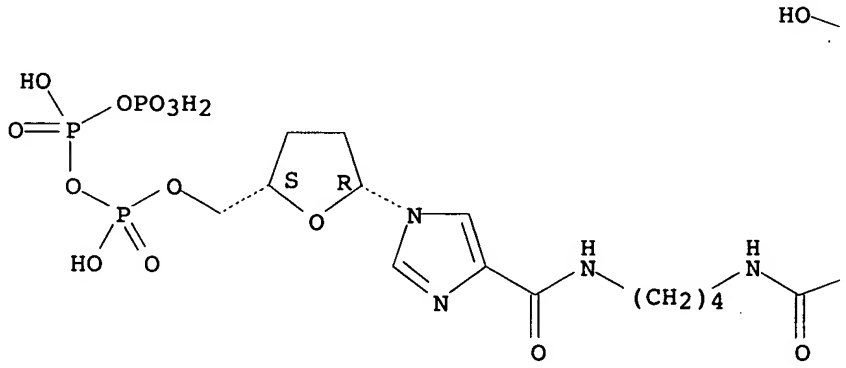
PAGE 1-B



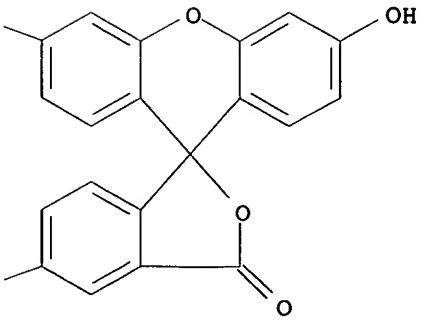
RN 257297-98-6 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



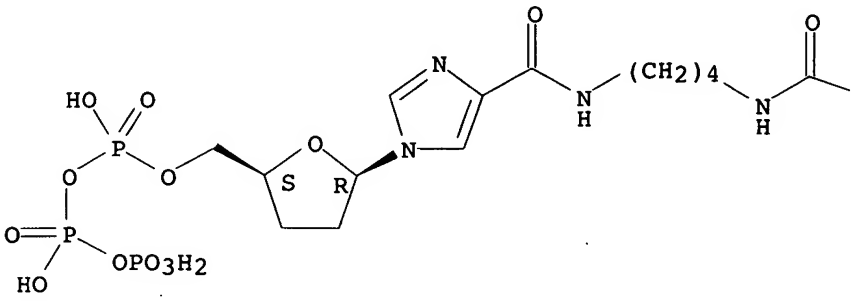
PAGE 1-B



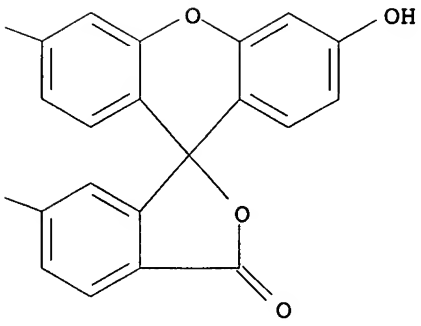
RN 694438-35-2 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-6-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



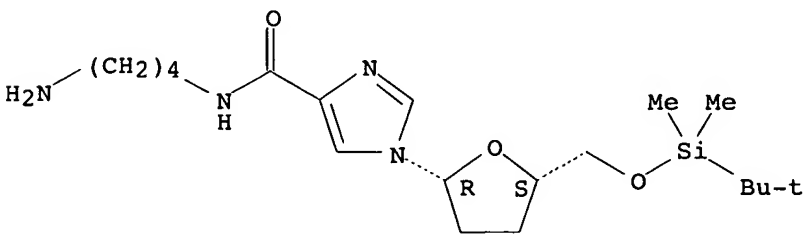
PAGE 1-B



IT 257297-74-8P 257297-75-9P 257297-76-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(labeled pseudoisocytidine and pseudouridine for use in labeling nucleic acids for hybridization assays)

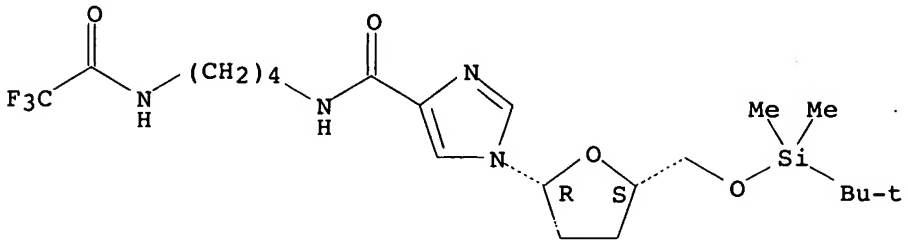
RN 257297-74-8 CAPLUS
CN 1H-Imidazole-4-carboxamide, N-(4-aminobutyl)-1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



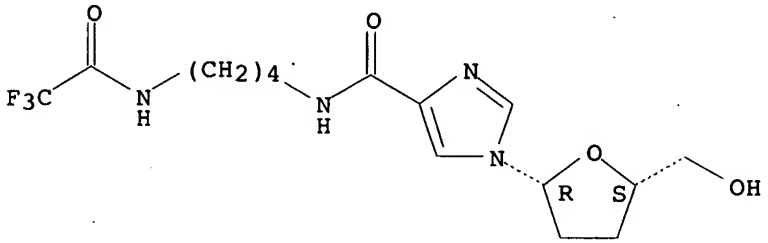
RN 257297-75-9 CAPLUS
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 257297-76-0 CAPLUS
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L11 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:757199 CAPLUS
DN 139:256248
TI Heterocyclic nucleoside derivatives for labeling of nucleic acids
IN McGall, Glenn; Barone, Anthony D.
PA Affymetrix, Inc., USA
SO U.S. Pat. Appl. Publ., 74 pp., Cont.-in-part of U.S. Ser. No. 882,649.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2003180757	A1	20030925	US 2002-314012	20021205
US 6864059	B2	20050308		
WO 9727317	A1	19970731	WO 1997-US1603	19970122
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6344316	B1	20020205	US 1997-882649	19970625
US 2001018514	A1	20010830	US 1998-126645	19980731
EP 1589025	A2	20051026	EP 2005-11696	19990720
EP 1589025	A3	20060419		

	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	US 2001044531	A1	20011122	US 2001-780574	20010209
	US 6596856	B2	20030722		
	US 2002165372	A1	20021107	US 2001-952387	20010911
	US 6965020	B2	20051115		
	US 2002182625	A1	20021205	US 2002-97113	20020312
	US 2004101892	A1	20040527	US 2003-641677	20030815
	CA 2507573	AA	20040624	CA 2003-2507573	20031205
	WO 2004052907	A1	20040624	WO 2003-US38652	20031205
	W: CA, JP				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
	EP 1575972	A1	20050921	EP 2003-787272	20031205
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
	JP 2006515863	T2	20060608	JP 2005-508470	20031205
	US 2005003496	A1	20050106	US 2003-745916	20031223
	JP 2006191932	A2	20060727	JP 2006-35873	20060213
	JP 2006258818	A2	20060928	JP 2006-77729	20060320
PRAI	US 1996-10471P	P	19960123		
	US 1997-35170P	P	19970109		
	WO 1997-US1603	A1	19970122		
	US 1997-882649	A2	19970625		
	US 1998-126645	B2	19980731		
	US 2001-780574	A2	20010209		
	US 2001-952387	A2	20010911		
	US 2002-97113	A2	20020312		
	JP 1997-527122	A3	19970122		
	EP 1999-937150	A3	19990720		
	JP 2000-562553	A3	19990720		
	US 2000-780574	A2	20000209		
	US 2000-231827P	P	20000911		
	US 2001-275202P	P	20010312		
	US 2002-314012	A2	20021205		
	US 2003-641677	A	20030815		
	WO 2003-US38652	W	20031205		

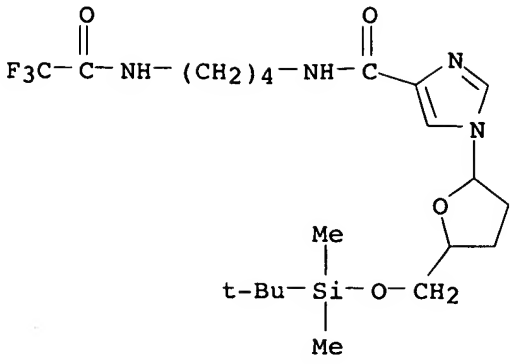
OS MARPAT 139:256248

AB Nucleosides in which the base is substituted by a heterocyclic derivative of a purine or pyrimidine base and that can be used to label nucleic acids are described. The heterocyclic derivative containing compds. are synthesized by condensing a heterocyclic derivative with a cyclic group (e.g. a ribofuranose derivative). The labeling compds. are suitable for enzymic attachment to a nucleic acid, either terminally or internally, to provide a mechanism of nucleic acid detection. Synthesis of imidazole and purine nucleoside derivs. is demonstrated. The triphosphates of these compds. were efficient substrates for terminal deoxynucleotide transferase and T7 RNA polymerase.

IT 603972-36-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deprotection of; heterocyclic nucleoside derivs. for labeling of nucleic acids)

RN 603972-36-7 CAPLUS

CN 1H-Imidazole-4-carboxamide, 1-[5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)



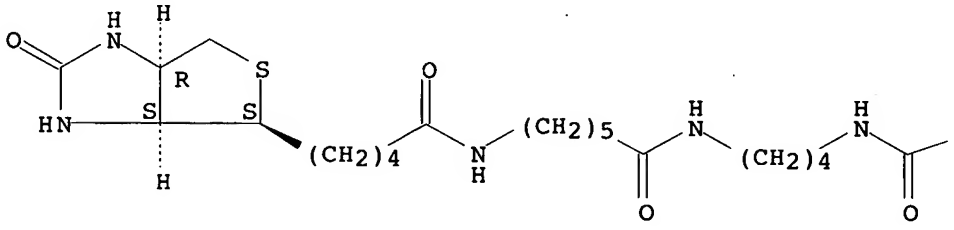
IT 603972-38-9P 603972-39-0P
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and reactions of; heterocyclic nucleoside derivs. for labeling of nucleic acids)

RN 603972-38-9 CAPLUS

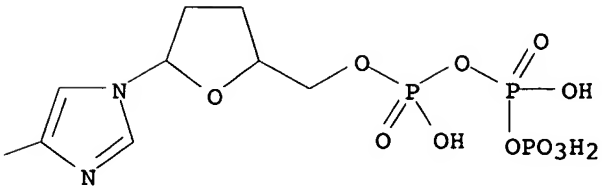
CN Triphosphoric acid, P-[[5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



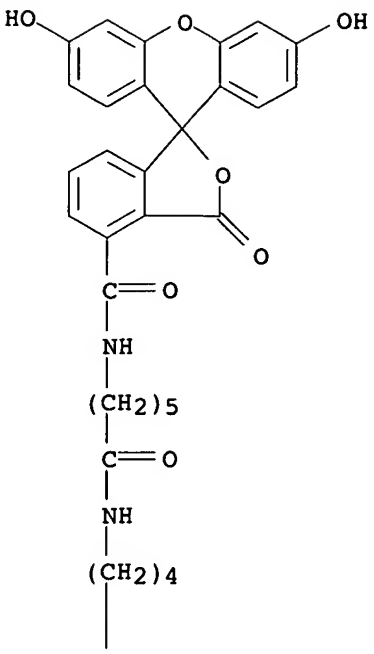
PAGE 1-B



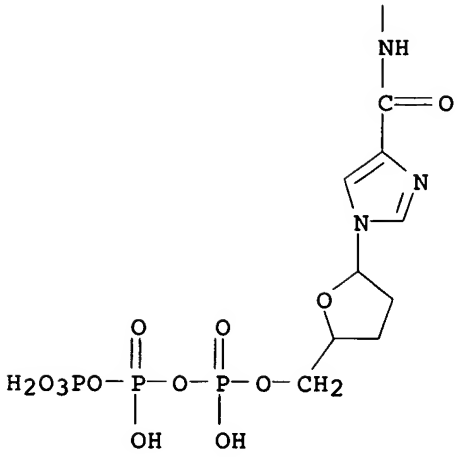
RN 603972-39-0 CAPLUS

CN Triphosphoric acid, P-[[5-[4-[[[4-[[6-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-4-yl)carbonyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



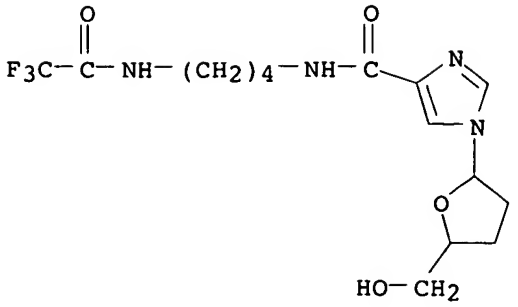
PAGE 2-A



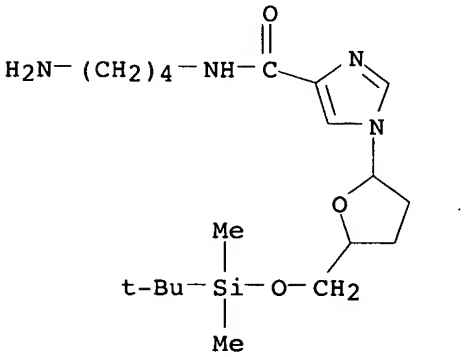
IT 603972-37-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions of; heterocyclic nucleoside derivs. for labeling of nucleic acids)

RN 603972-37-8 CAPLUS

CN 1H-Imidazole-4-carboxamide, 1-[tetrahydro-5-(hydroxymethyl)-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)



IT 603972-35-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions pf; heterocyclic nucleoside derivs. for labeling of nucleic acids)
RN 603972-35-6 CAPLUS
CN 1H-Imidazole-4-carboxamide, N-(4-aminobutyl)-1-[5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]- (9CI) (CA INDEX NAME)



RE.CNT 159 THERE ARE 159 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:850353 CAPLUS
DN 137:347498
TI Nucleic acid labeling compounds of heterocyclic derivatives containing a detectable moiety
IN McGall, Glenn; Barone, Anthony D.
PA Affymetrix, Inc., USA
SO U.S. Pat. Appl. Publ., 68 pp., Cont.-in-part of U. S. 6,344,316.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002165372	A1	20021107	US 2001-952387	20010911
	US 6965020	B2	20051115		
	WO 9727317	A1	19970731	WO 1997-US1603	19970122

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,

IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
US 6344316 B1 20020205 US 1997-882649 19970625
US 2001018514 A1 20010830 US 1998-126645 19980731
EP 1589025 A2 20051026 EP 2005-11696 19990720
EP 1589025 A3 20060419
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY
US 2003180757 A1 20030925 US 2002-314012 20021205
US 6864059 B2 20050308
US 2004101892 A1 20040527 US 2003-641677 20030815
US 2005003496 A1 20050106 US 2003-745916 20031223
US 2004210045 A1 20041021 US 2004-842778 20040511
US 2005287563 A1 20051229 US 2005-125338 20050510
JP 2006191932 A2 20060727 JP 2006-35873 20060213
JP 2006258818 A2 20060928 JP 2006-77729 20060320
PRAI US 1996-10471P P 19960123
US 1997-35170P P 19970109
WO 1997-US1603 A1 19970122
US 1997-882649 A2 19970625
US 1998-126645 A2 19980731
US 2000-780574 A2 20000209
US 2000-231827P P 20000911
US 2001-275202P P 20010312
JP 1997-527122 A3 19970122
EP 1999-937150 A3 19990720
JP 2000-562553 A3 19990720
US 2001-780574 A2 20010209
US 2001-952387 A2 20010911
US 2002-97113 A2 20020312
US 2002-314012 A2 20021205
US 2003-641677 A2 20030815

AB The invention concerns nucleic acid labeling compds. containing heterocyclic derivs. The heterocyclic derivative containing compds. are synthesized by condensing a heterocyclic derivative with a cyclic group (e.g. a ribofuranose derivative). The labeling compds. are suitable for enzymic attachment to a nucleic acid, either terminally or internally, to provide a mechanism of nucleic acid detection.

IT 257297-78-2P, Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester 257297-98-6P, Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester 373390-73-9P, 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-2-oxo-N-[6-oxo-6-[[4-[[[1-[(2R,5S)-tetrahydro-5-hydroxy-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]amino]hexyl]-, (3aS,4S,6aR)- 373390-75-1P, Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, 3',6'-dihydroxy-3-oxo-N-[4-[[[1-[(2R,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]- 373391-06-1P, 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-2-oxo-N-[6-oxo-6-[[4-[[[1-(tetrahydro-5-hydroxy-2-furanyl)-1H-imidazol-4-yl]carbonyl]amino]butyl]amino]hexyl]-, (3aS,4S,6aR)- 373391-22-1P, 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-2-oxo-N-[6-oxo-6-[[4-[[[1-[(2S,5S)-tetrahydro-5-hydroxy-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]amino]hexyl]-, (3aS,4S,6aR)- 373391-24-3P, Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, 3',6'-dihydroxy-3-oxo-N-[4-[[[1-[(2S,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]- 373391-42-5P, Triphosphoric acid, P-[[(2S,5S)-5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester 373391-43-6P

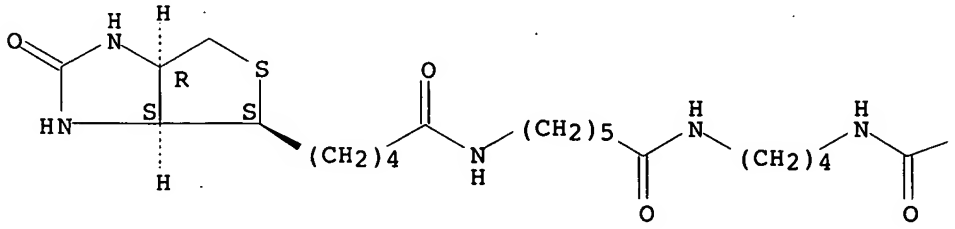
, Triphosphoric acid, P-[[(2S,5S)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester
RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(nucleic acid labeling compds. of heterocyclic derivs. containing a detectable moiety)

RN 257297-78-2 CAPLUS

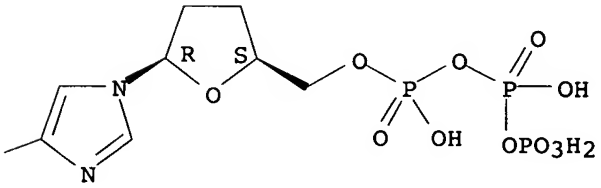
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

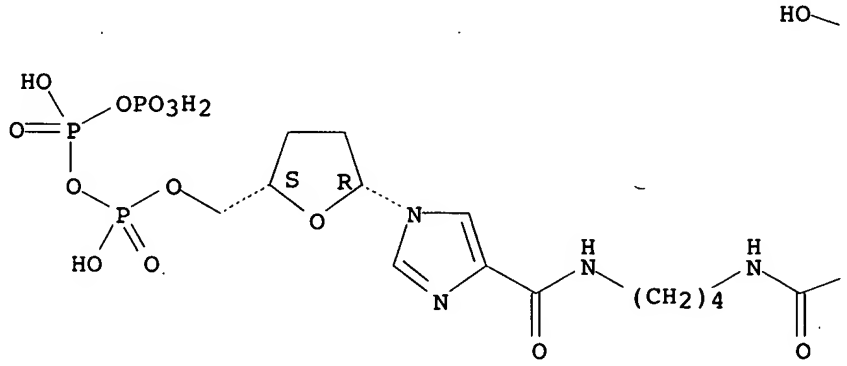


RN 257297-98-6 CAPLUS

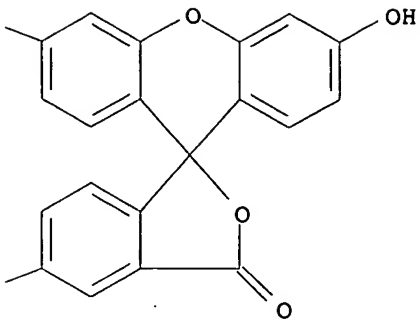
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



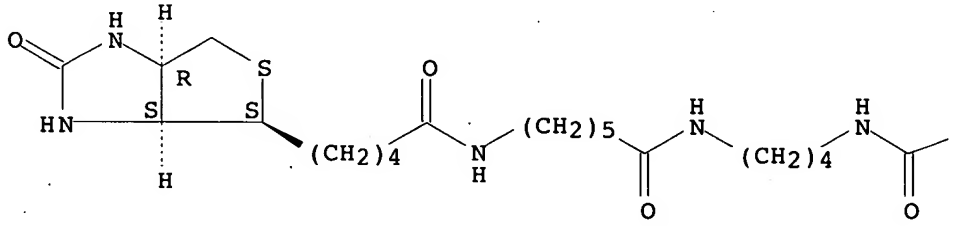
PAGE 1-B



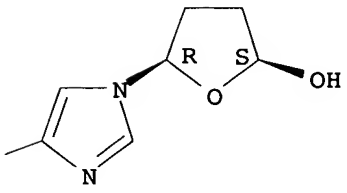
RN 373390-73-9 CAPLUS
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-2-oxo-N-[6-oxo-6-[[4-[[[1-[(2R,5S)-tetrahydro-5-hydroxy-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]amino]hexyl]-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



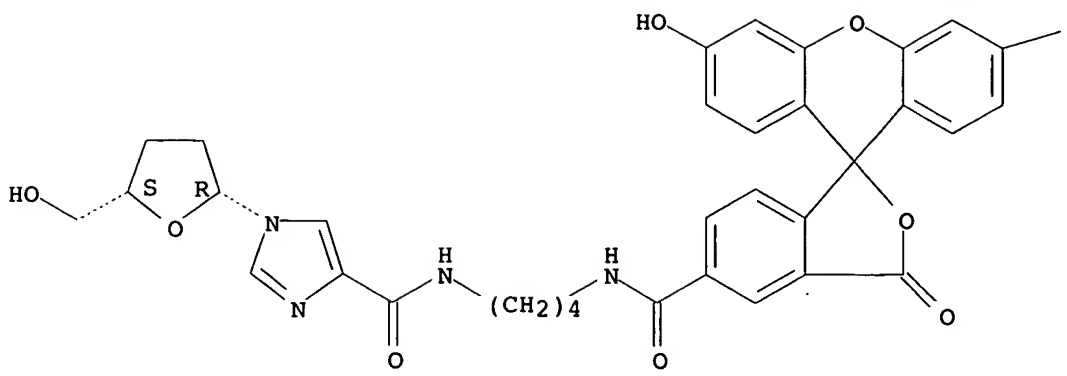
PAGE 1-B



RN 373390-75-1 CAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, 3',6'-dihydroxy-3-oxo-N-[4-[[[1-[(2R,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



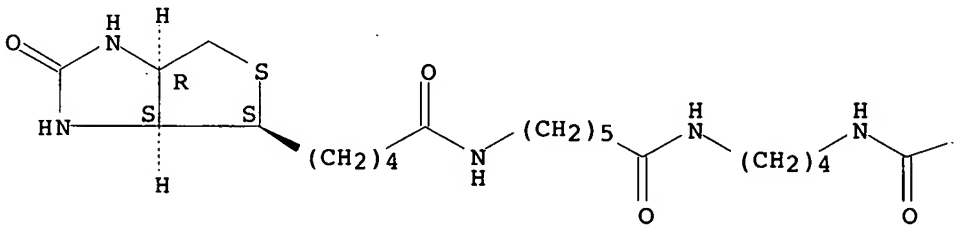
PAGE 1-B

—OH

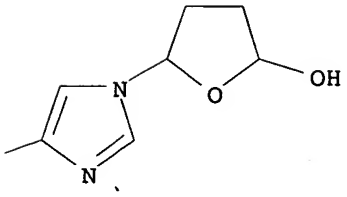
RN 373391-06-1 CAPLUS
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-2-oxo-N-[6-oxo-6-[[4-[[[1-(tetrahydro-5-hydroxy-2-furanyl)-1H-imidazol-4-yl]carbonyl]amino]butyl]amino]hexyl]-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



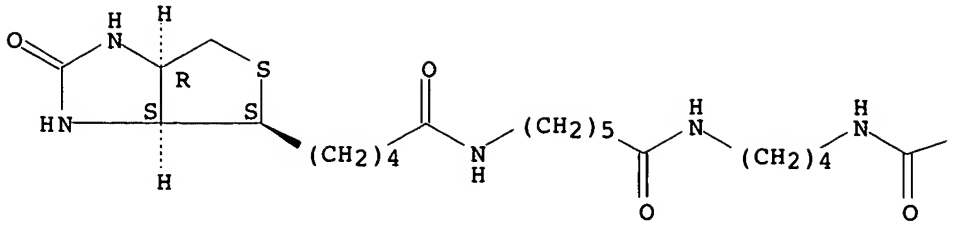
PAGE 1-B



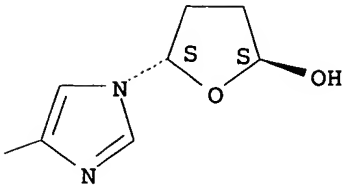
RN 373391-22-1 CAPLUS
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-2-oxo-N-[6-oxo-6-[[4-[[[1-[(2S,5S)-tetrahydro-5-hydroxy-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]amino]hexyl]-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



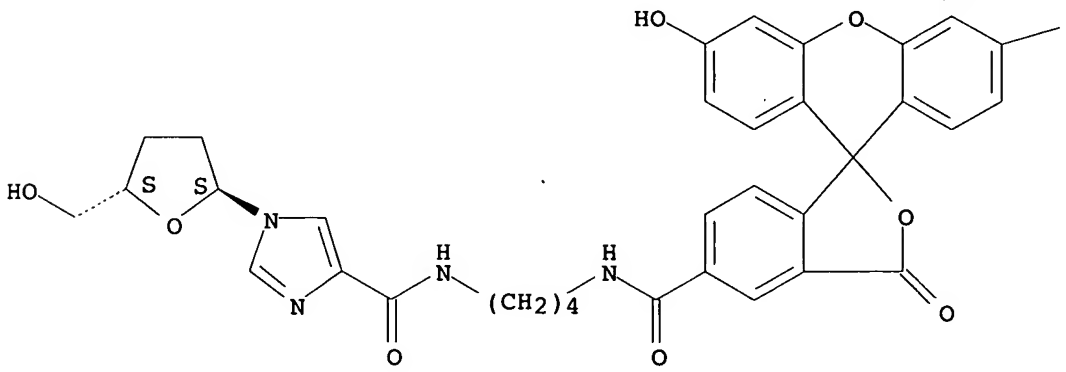
PAGE 1-B



RN 373391-24-3 CAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, 3',6'-dihydroxy-3-oxo-N-[4-[[[1-[(2S,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

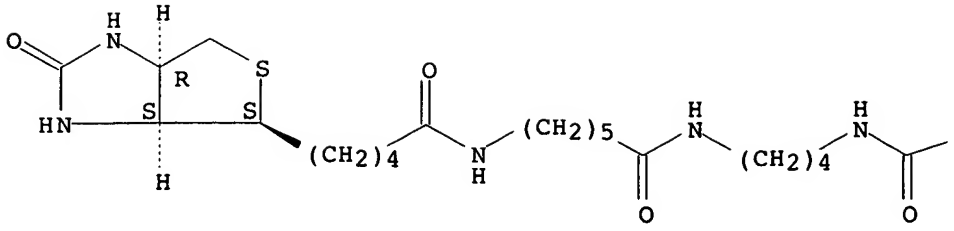


PAGE 1-B

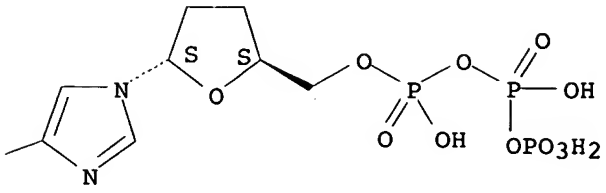
RN 373391-42-5 CAPLUS
CN Triphosphoric acid, P-[[(2S,5S)-5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



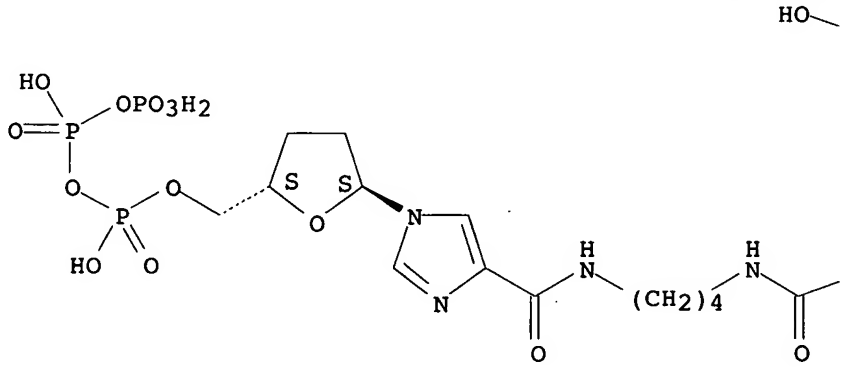
PAGE 1-B



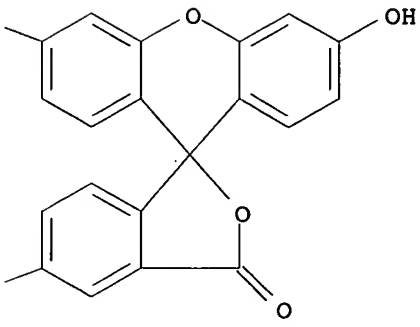
RN 373391-43-6 CAPLUS
CN Triphosphoric acid, P-[[(2S,5S)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



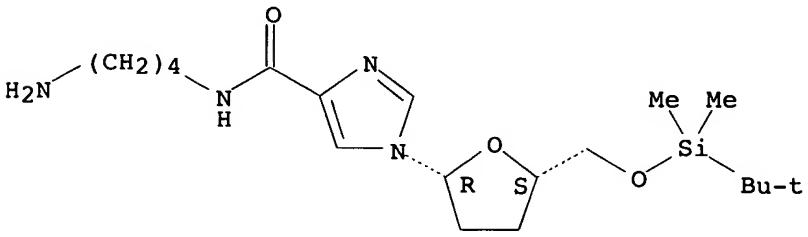
PAGE 1-B



IT 257297-74-8P, 1H-Imidazole-4-carboxamide, N-(4-aminobutyl)-1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]- 257297-75-9P, 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- 257297-76-0P, 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- 257297-77-1P, Triphosphoric acid, P-[[(2S,5R)-tetrahydro-5-[4-[[[4-[(trifluoroacetyl)amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]-2-furanyl]methyl] ester
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleic acid labeling compds. of heterocyclic derivs. containing a detectable moiety)

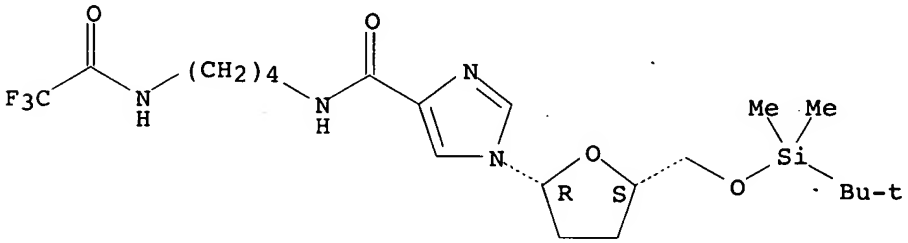
RN 257297-74-8 CAPLUS
CN 1H-Imidazole-4-carboxamide, N-(4-aminobutyl)-1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



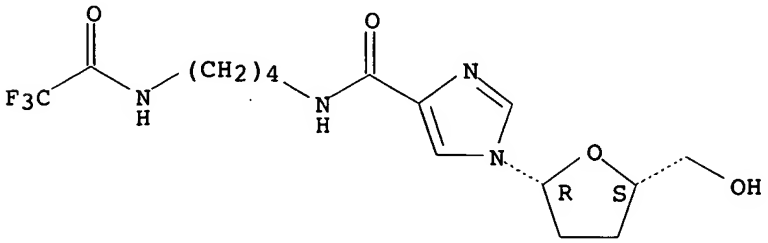
RN 257297-75-9 CAPLUS
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



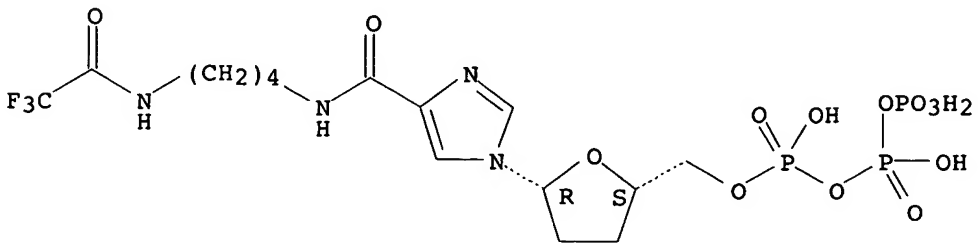
RN 257297-76-0 CAPLUS
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 257297-77-1 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-tetrahydro-5-[4-[[[4-[(trifluoroacetyl)amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 273 THERE ARE 273 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:851808 CAPLUS
DN 135:367666
TI Nucleotide analogs and their use in labeling nucleic acids for hybridization assays
IN McGall, Glenn; Barone, Anthony D.
PA Affymetrix, Inc., USA
SO U.S. Pat. Appl. Publ., 47 pp., Cont.-in-part of U.S. Appl. 2001 18,514.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001044531	A1	20011122	US 2001-780574	20010209
	US 6596856	B2	20030722		
	US 2001018514	A1	20010830	US 1998-126645	19980731
	EP 1589025	A2	20051026	EP 2005-11696	19990720
	EP 1589025	A3	20060419		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	US 2003180757	A1	20030925	US 2002-314012	20021205
	US 6864059	B2	20050308		
	US 2003232979	A1	20031218	US 2003-452375	20030602
	US 6844433	B2	20050118		
	US 2004002595	A1	20040101	US 2003-452519	20030602
	US 2004101892	A1	20040527	US 2003-641677	20030815
	US 2005003496	A1	20050106	US 2003-745916	20031223
	US 2004210045	A1	20041021	US 2004-842778	20040511
	US 2005164268	A1	20050728	US 2005-37065	20050118
	US 2005287563	A1	20051229	US 2005-125338	20050510
	JP 2006258818	A2	20060928	JP 2006-77729	20060320
PRAI	US 1998-126645	A2	19980731		
	US 1996-10471P	P	19960123		
	US 1997-35170P	P	19970109		
	WO 1997-US1603	A1	19970122		
	US 1997-882649	A2	19970625		
	EP 1999-937150	A3	19990720		
	JP 2000-562553	A3	19990720		
	US 2000-231827P	P	20000911		
	US 2001-780574	A2	20010209		
	US 2001-275202P	P	20010312		
	US 2001-952387	A2	20010911		

US 2002-97113 A2 20020312
US 2002-314012 A2 20021205
US 2003-452375 A3 20030602
US 2003-641677 A2 20030815

OS MARPAT 135:367666

AB Nucleic acid labeling compds. containing heterocyclic derivs. are disclosed. The heterocyclic derivative containing compds. are synthesized by condensing a heterocyclic derivative with a cyclic group (e.g. a ribofuranose derivative). The labeling compds. are suitable for enzymic attachment to a nucleic acid, either terminally or internally, to provide a mechanism of nucleic acid detection. Thus, a number of biotin- or fluorescein purine- and pyrimidine-β-D-ribofuranoside analogs were prepared These analogs were successfully incorporated into hybridization probes (using terminal deoxynucleotidyltransferase) and utilized in single nucleotide polymorphism geno-typing using micro-chip arrays.

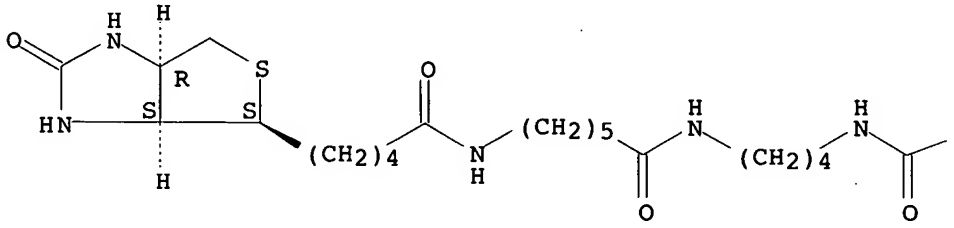
IT 257297-78-2P 257297-98-6P 373390-73-9P
373390-75-1P 373391-06-1P 373391-22-1P
373391-24-3P 373391-42-5P 373391-43-6P
RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(nucleotide analogs and their use in labeling nucleic acids for hybridization assays)

RN 257297-78-2 CAPLUS

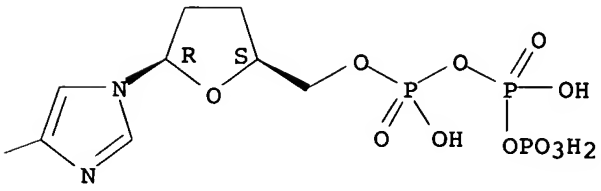
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

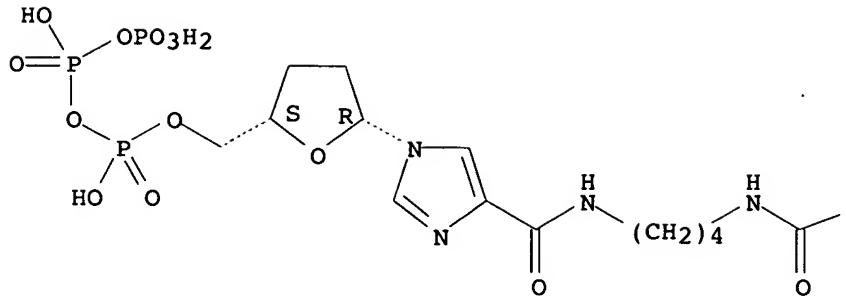


RN 257297-98-6 CAPLUS

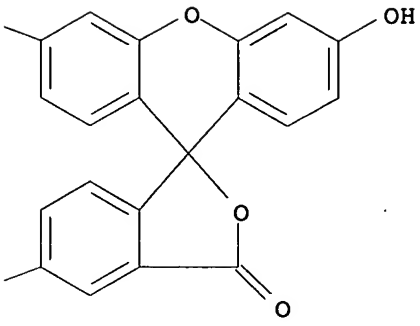
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

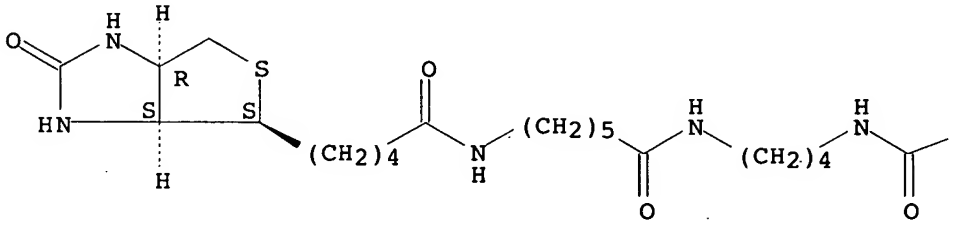


RN 373390-73-9 CAPLUS

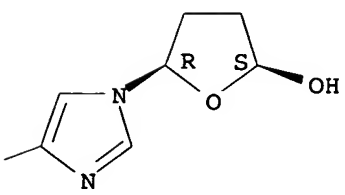
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-2-oxo-N-[6-oxo-6-[[4-[[[1-[(2R,5S)-tetrahydro-5-hydroxy-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]amino]hexyl]-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



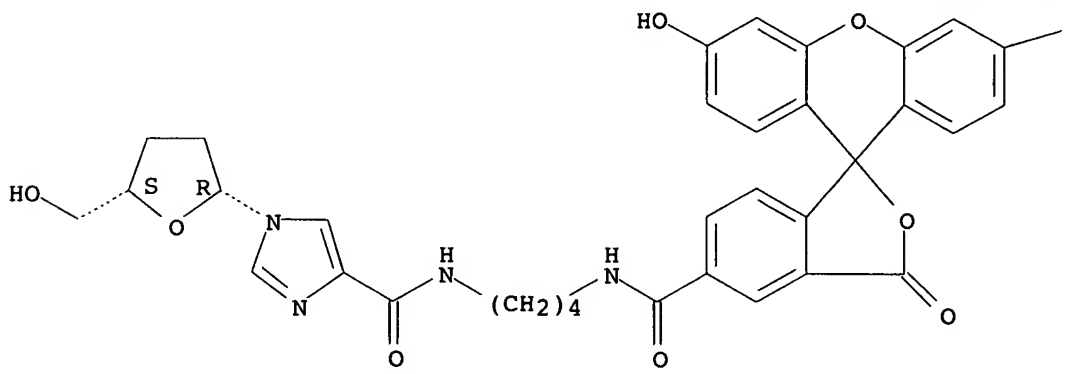
PAGE 1-B



RN 373390-75-1 CAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, 3',6'-dihydroxy-3-oxo-N-[4-[[[1-[(2R,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

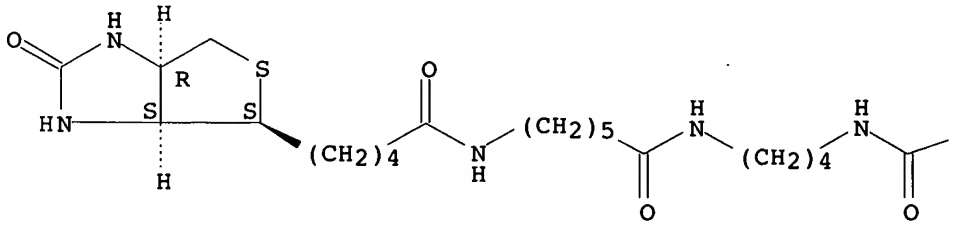


PAGE 1-B

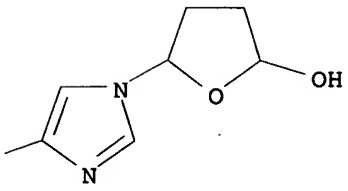
RN 373391-06-1 CAPLUS
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-2-oxo-N-[6-oxo-6-[[4-[[[1-(tetrahydro-5-hydroxy-2-furanyl)-1H-imidazol-4-yl]carbonyl]amino]butyl]amino]hexyl]-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

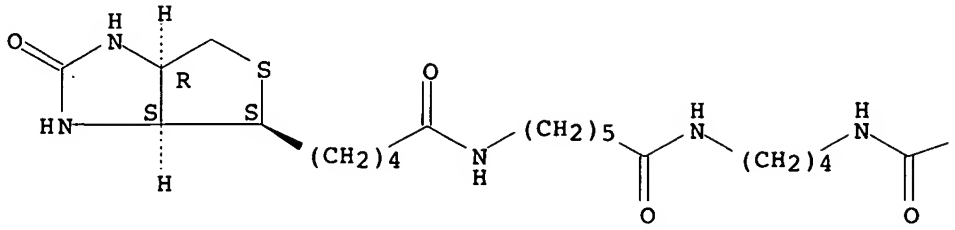


RN 373391-22-1 CAPLUS
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-2-oxo-N-[6-oxo-6-[[4-[[[1-[(2S,5S)-tetrahydro-5-hydroxy-2-furanyl]-1H-imidazol-4-

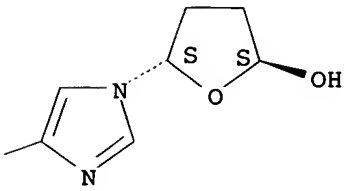
yl]carbonyl]amino]butyl]amino]hexyl]-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



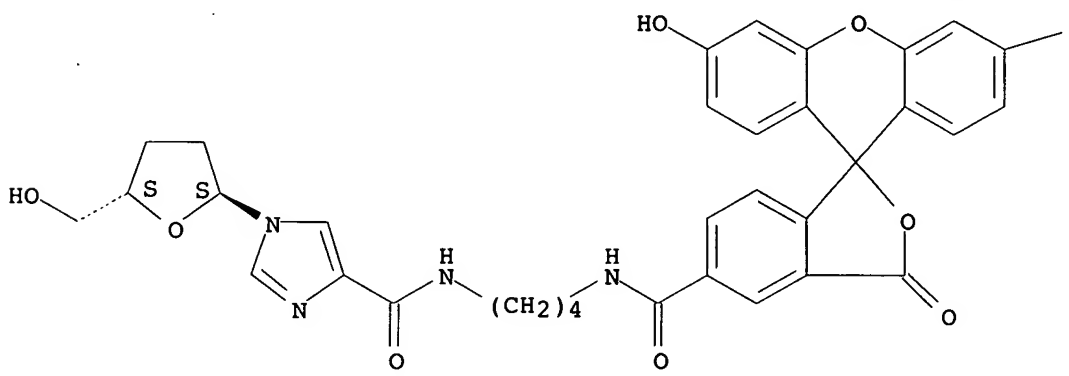
PAGE 1-B



RN 373391-24-3 CAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-5-carboxamide, 3',6'-dihydroxy-3-oxo-N-[4-[[[1-[(2S,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-1H-imidazol-4-yl]carbonyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



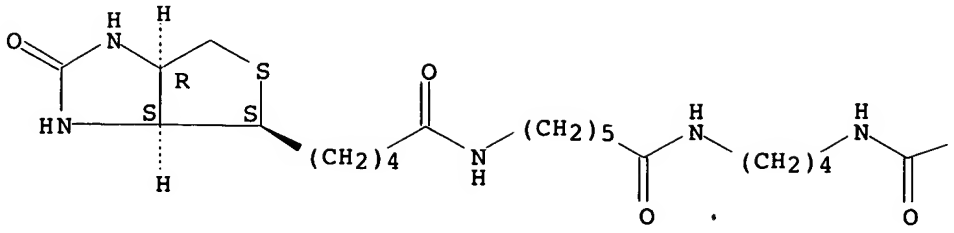
PAGE 1-B

OH

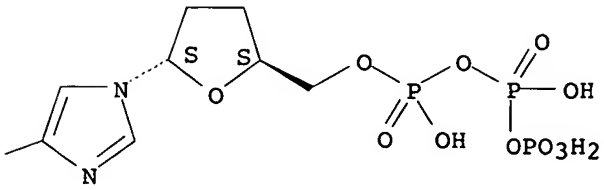
RN 373391-42-5 CAPLUS
CN Triphosphoric acid, P-[[(2S,5S)-5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



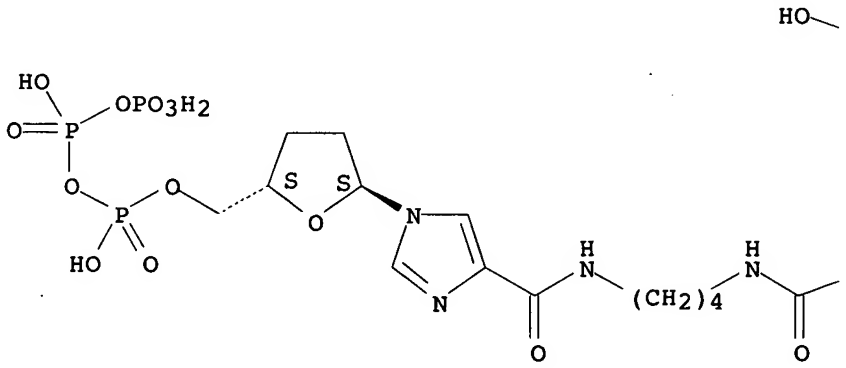
PAGE 1-B

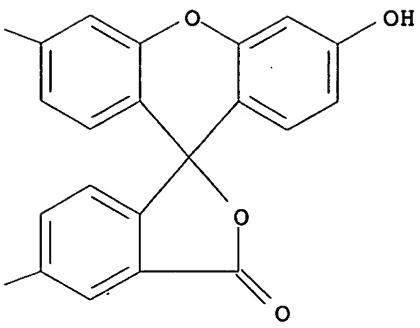


RN 373391-43-6 CAPLUS
CN Triphosphoric acid, P-[[(2S,5S)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

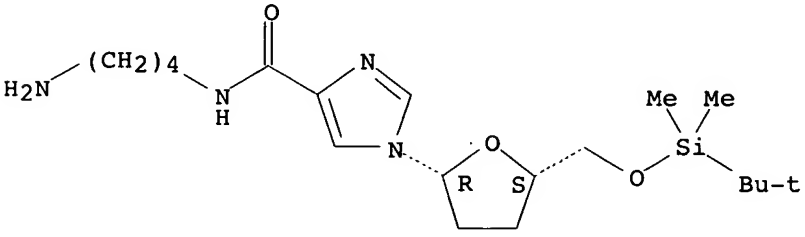




IT 257297-74-8P 257297-75-9P 257297-76-0P
257297-77-1P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleotide analogs and their use in labeling nucleic acids for hybridization assays)

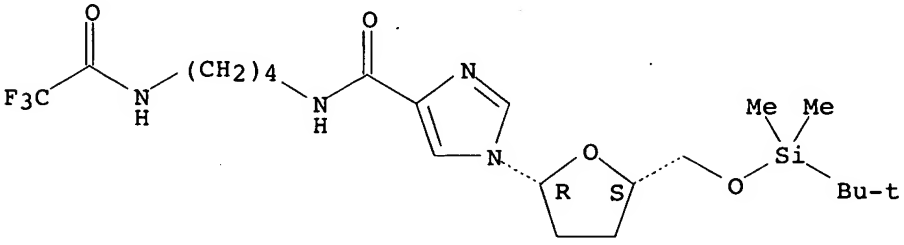
RN 257297-74-8 CAPLUS
CN 1H-Imidazole-4-carboxamide, N-(4-aminobutyl)-1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



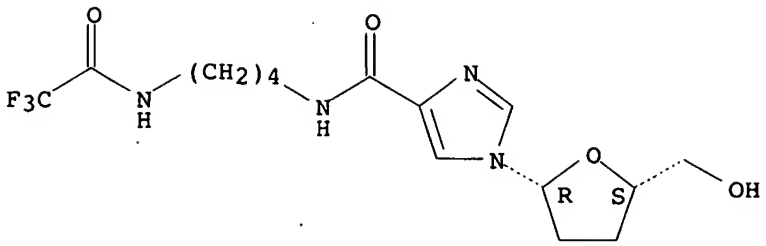
RN 257297-75-9 CAPLUS
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



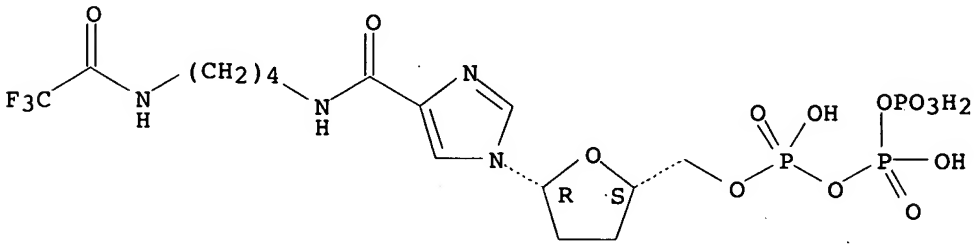
RN 257297-76-0 CAPLUS
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 257297-77-1 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-tetrahydro-5-[4-[[[4-[(trifluoroacetyl)amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

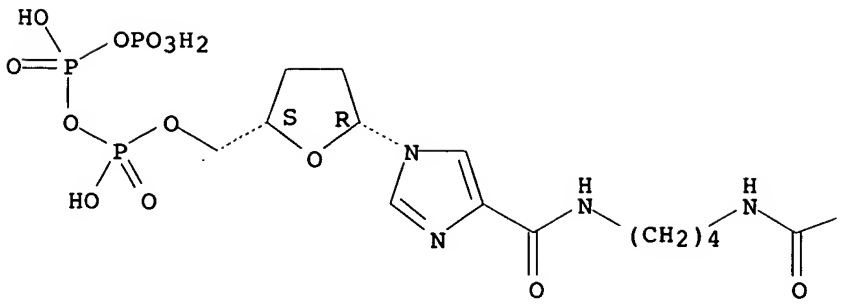
Absolute stereochemistry.



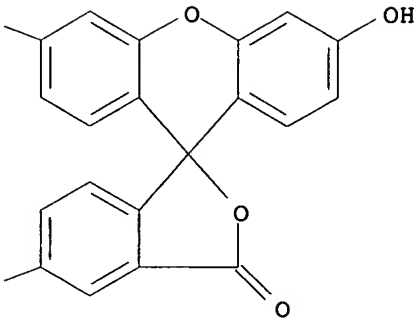
L11 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:675161 CAPLUS
DN 136:37868
TI Novel nucleoside triphosphate analogs for the enzymatic labeling of nucleic acids
AU Barone, A. D.; Chen, C.; McGall, G. H.; Rafii, K.; Buzby, Philip R.; Dimeo, James J.
CS Affymetrix, Inc., Santa Clara, CA, USA
SO Nucleosides, Nucleotides & Nucleic Acids (2001), 20(4-7), 1141-1145
CODEN: NNNAFY; ISSN: 1525-7770
PB Marcel Dekker, Inc.
DT Journal
LA English
AB We have evaluated several novel nucleotide analogs suitable for enzymic labeling of nucleic acid targets for a variety of array-based assays. Two new reagents in particular, a C4-labeled 1-(2',3'-dideoxy-β-D-ribofuranosyl) imidazole-4-carboxamide 5'-triphosphate and an N1-labeled 5-(β-D-ribofuranosyl)-2,4(1H,3H)-pyrimidinedione 5'-triphosphate , were found to be excellent substrates for labeling with terminal deoxynucleotidyl transferase and T7 RNA polymerase, resp.
IT 257297-98-6 380601-34-3
RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(preparation of nucleoside triphosphate analogs for enzymic labeling of nucleic acids)
RN 257297-98-6 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



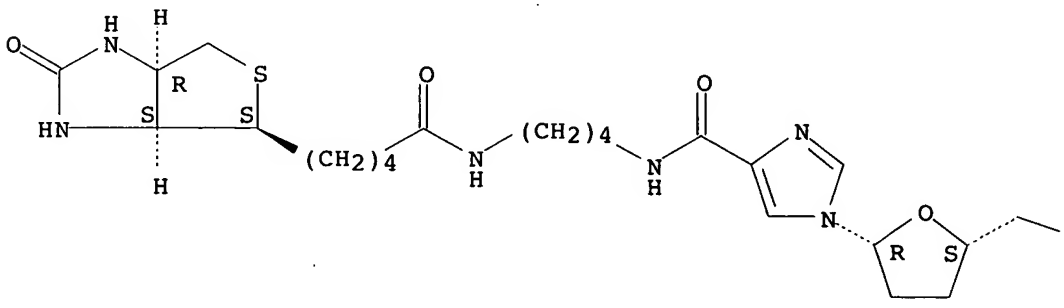
PAGE 1-B

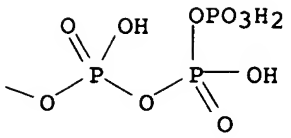


RN 380601-34-3 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:98825 CAPLUS
DN 132:133201
TI Nucleotide analogs and their use in labeling nucleic acids for hybridization assays
IN McGall, Glenn H.; Barone, Anthony D.
PA Affymetrix, Inc., USA
SO PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000006771	A2	20000210	WO 1999-US12390	19990720
	WO 2000006771	C2	20020822		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2001018514	A1	20010830	US 1998-126645	19980731
	CA 2339016	AA	20000210	CA 1999-2339016	19990720
	AU 9952035	A1	20000221	AU 1999-52035	19990720
	EP 1124838	A2	20010822	EP 1999-937150	19990720
	EP 1124838	B1	20050601		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002521495	T2	20020716	JP 2000-562553	19990720
	AT 296833	E	20050615	AT 1999-937150	19990720
	EP 1589025	A2	20051026	EP 2005-11696	19990720
	EP 1589025	A3	20060419		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	JP 2006258818	A2	20060928	JP 2006-77729	20060320
PRAI	US 1998-126645	A	19980731		
	EP 1999-937150	A3	19990720		
	JP 2000-562553	A3	19990720		
	WO 1999-US12390	W	19990720		

OS MARPAT 132:133201
AB Nucleic acid labeling compds. containing heterocyclic derivs. are disclosed. The heterocyclic derivative containing compds. are synthesized by condensing a heterocyclic derivative with a cyclic group (e.g. a ribofuranose derivative). The labeling compds. are suitable for enzymic attachment to a nucleic acid, either terminally or internally, to provide

a mechanism of nucleic acid detection. Thus, a number of biotin- or fluorescein purine- and pyrimidine-β-D-ribofuranoside analogs were prepared These analogs were successfully incorporated into hybridization probes (using terminal deoxynucleotidyltransferase) and utilized in single nucleotide polymorphism genotyping using microchip arrays.

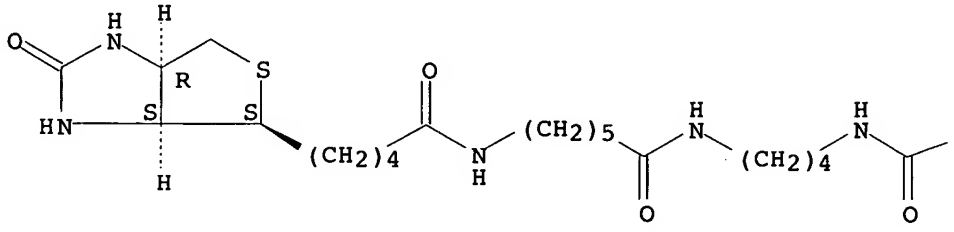
IT 257297-78-2P 257297-98-6P
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(nucleotide analogs and their use in labeling nucleic acids for hybridization assays)

RN 257297-78-2 CAPLUS

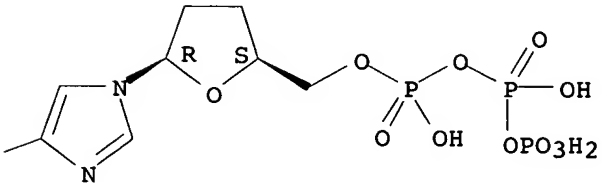
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[6-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

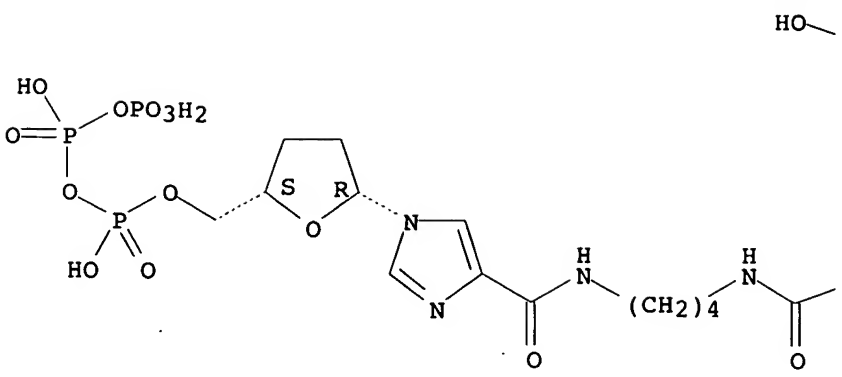


RN 257297-98-6 CAPLUS

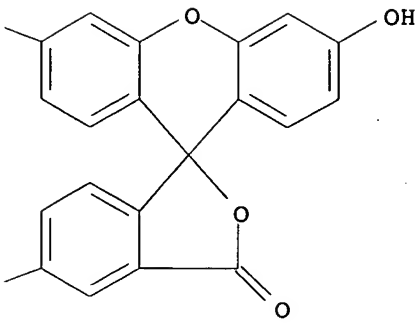
CN Triphosphoric acid, P-[[(2S,5R)-5-[4-[[[4-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]tetrahydro-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

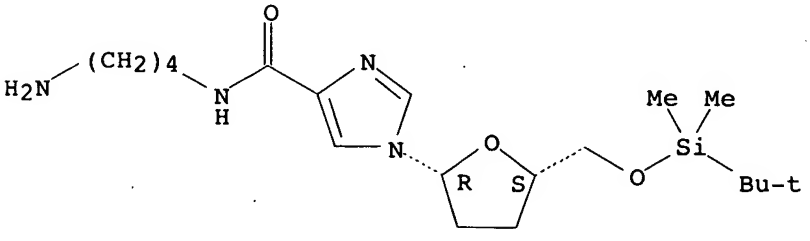


IT 257297-74-8P 257297-75-9P 257297-76-0P
257297-77-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nucleotide analogs and their use in labeling nucleic acids for hybridization assays)

RN 257297-74-8 CAPLUS

CN 1H-Imidazole-4-carboxamide, N-(4-aminobutyl)-1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]- (9CI) (CA INDEX NAME)

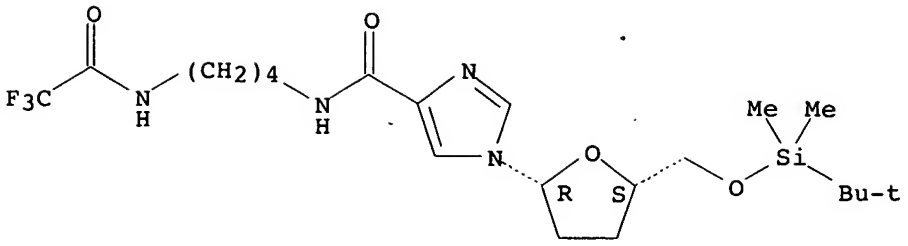
Absolute stereochemistry.



RN 257297-75-9 CAPLUS

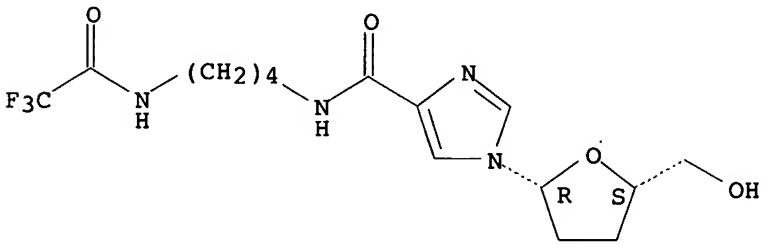
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-5-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]tetrahydro-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



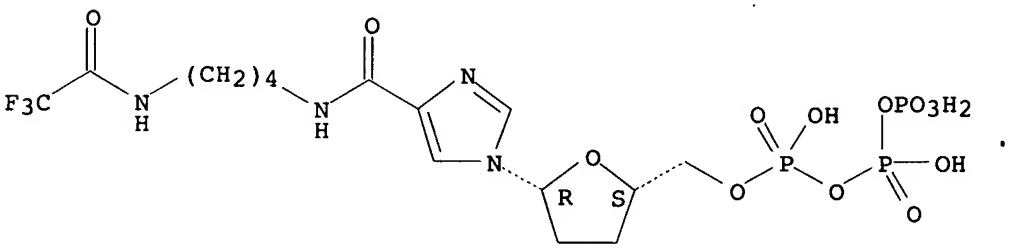
RN 257297-76-0 CAPLUS
CN 1H-Imidazole-4-carboxamide, 1-[(2R,5S)-tetrahydro-5-(hydroxymethyl)-2-furanyl]-N-[4-[(trifluoroacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 257297-77-1 CAPLUS
CN Triphosphoric acid, P-[[(2S,5R)-tetrahydro-5-[4-[[[4-[(trifluoroacetyl)amino]butyl]amino]carbonyl]-1H-imidazol-1-yl]-2-furanyl]methyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L11 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:202165 CAPLUS
DN 114:202165
TI Radiochemical assay of adenylosuccinase: demonstration of parallel loss of activity toward both adenylosuccinate and succinylaminoimidazole carboxamide ribotide in liver of patients with the enzyme defect
AU Van den Bergh, Francois; Vincent, M. Francoise; Jaeken, Jaak; Van den Berghe, Georges
CS Lab. Physiol. Chem., Int. Inst. Cell. Mol. Pathol., Brussels, B-1200, Belg.
SO Analytical Biochemistry (1991), 193(2), 287-91
CODEN: ANBCA2; ISSN: 0003-2697
DT Journal
LA English
AB A radiochem. assay for adenylosuccinase (I) an enzyme which intervenes twice in the biosynthesis of adenine nucleotides, was developed. The 2

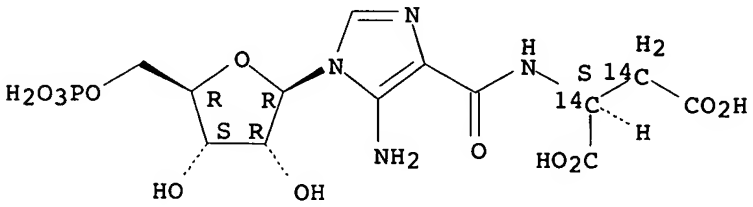
substrates of the enzyme, succinylaminoimidazole carboxamide ribotide (SAICAR) and adenylosuccinate (S-AMP), were synthesized in radioactive form by incubating [2,3-14C]fumarate and, resp., AICAR and AMP with partially purified I from yeast. Enzyme activities were determined by measuring the release of labeled fumarate after its separation from the substrate by chromatog. on polyethyleneimine thin-layer plates. The ratio of the activity of I measured with SAICAR compared to that with S-AMP was .apprx.1 in crude exts. of rat liver and muscle and .apprx.0.5 in human liver. In rat and human liver, but not in rat muscle, 20-40% of both activities of I were lost after freezing at -80° followed by thawing. In the liver of patients with I deficiency, in whom the deficiency had hitherto been measured only with S-AMP, the activity of the enzyme toward S-AMP and SAICAR was found to be lost in parallel. This was in accordance with the finding that both SAICA-riboside and succinyladenosine accumulate in I-deficient patients.

IT 133694-48-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(enzymic preparation of)

RN 133694-48-1 CAPLUS

CN L-Aspartic-2,3-14C2 acid, N-[[5-amino-1-(5-O-phosphono-β-D-ribofuranosyl)-1H-imidazol-4-yl]carbonyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L11 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1990:269 CAPLUS

DN 112:269

TI Chromatographic analysis of purine precursors in mouse L1210 leukemia

AU Sant, Melissa E.; Poiner, Anthony; Harsanyi, Michael C.; Lyons, Stephen D.; Christopherson, Richard I.

CS Dep. Biochem., Univ. Sydney, Sydney, 2006, Australia

SO Analytical Biochemistry (1989), 182(1), 121-8
CODEN: ANBCA2; ISSN: 0003-2697

DT Journal

LA English

AB A number of antagonists of nucleotide metabolism with anti-cancer activity affect the de novo purine pathway. To determine the biochem. mechanisms of cytotoxicity of these drugs, assay procedures have been developed for measurement of the levels of intermediates proximal to IMP in the pathway for de novo purine biosynthesis in mouse L1210 leukemia cells. Purine precursors have been synthesized in vitro from [14C]-glycine using enzymes from chicken liver. These 14C-labeled intermediates have been used as marker compds. to define retention times for metabolites of leukemia cells separated by HPLC and the chromatog. mobilities of these intermediates after two-dimensional TLC. These new chromatog. procedures have been used in combination to determine the steady-state concns. for purine precursors in mouse L1210 leukemia cells in the exponential phase of growth: N-formylglycineamide ribotide (16 μM); N-formylglycineamidine ribotide (4.7 μM); 5-aminoimidazole ribotide (4.0 μM); 4-carboxy-5-aminoimidazole ribotide (0.46 μM); N-succino-5-aminoimidazole-4-carboxyamide ribotide (11 μM); 5-aminoimidazole-4-carboxamide ribotide (16 μM); 5-formamidoimidazole-4-carboxamide ribotide (2.7 μM) and IMP (57 μM). The metabolic effects of

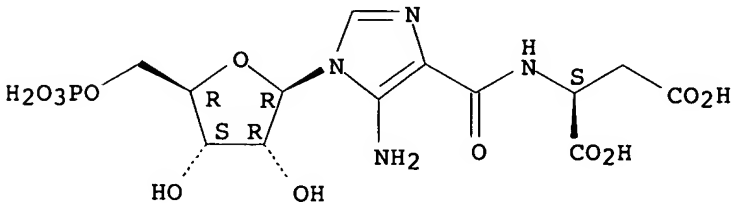
tiazofurin (25 μM) upon a mouse L1210 leukemia cells growing in culture define a "metabolic crossover point" at the reaction catalyzed by IMP dehydrogenase (EC 1.1.1.205) which confirms previous reports of inhibition of this enzyme.

IT 3031-95-6
RL: ANT (Analyte); ANST (Analytical study)
(determination of, in leukemia cells by HPLC, metabolite effect of antitumor agent in relation to)

RN 3031-95-6 CAPLUS

CN L-Aspartic acid, N-[[5-amino-1-(5-O-phosphono-β-D-ribofuranosyl)-1H-imidazol-4-yl]carbonyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=>
=>